REMARKS

Claims 1-8 are all the claims pending in the application.

Applicants thank the Examiner for acknowledging their claim to priority under 35 U.S.C. § 119, and receipt of a certified copy of the priority document.

The Examiner has objected to Figs. 1 and 2, asking Applicants to add labels "Prior Art". The Examiner has objected to Fig. 2, asking Applicants to add labels for the blocks. In response, Applicants have amended the drawings, following the Examiner's suggestions.

The Examiner has objected to Fig. 3, because an element 8 is not mentioned in the description. Applicants have amended the paragraph bridging pages 4 and 5 of the specification, adding the reference number 8.

The Examiner has objected to Fig. 5, asking Applicants to add reference number 17. The original Fig. 5 has the reference number 17. Applicants have added a block for the reference number 17 in Fig. 5.

No new matter has been added.

Claims 1-3 and 5 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the admitted prior art of the present application in view of USP 6,307,884 to Du et al. Claims 4 and 8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the admitted prior art in view of Du, and further in view of USP 6,295,152 to Wedding. Claim 6 stands rejected under 35 U.S.C. §103(a) as being unpatentable over the admitted prior art in view of Du, and further in view of USP 6,285,709 to Alelyunas et al. Claim 7 is objected to for being dependent upon a

rejected base claim. Applicants respectfully traverse these rejections and objections, and request reconsideration and allowance of the pending claims in view of the following arguments.

Claim 1 of the present application recites a process for recovering disturbed digital optical signals, comprising the steps of: passing the electrical disturbed signals through a feedback decision circuit comprising at least two parallel-connected threshold decision elements; using the decided signals and an estimated dispersion as the basis for the synthesisation of synthetic, dispersive signals; and generating an error signal with the disturbed signals and the synthetic dispersive signals.

The Examiner has asserted that the admitted prior art of the present application teaches the step of using the decided signals and an estimated dispersion as the basis for the synthesisation of synthetic dispersive signals, and the step of generating an error signal with the disturbed signals and the synthetic dispersive signals. Applicants respectfully disagree.

In the Background part, the present application describes a prior art equalizer. As shown in Fig. 1, a threshold decision element 2 receives an electrical disturbed signal 1 and outputs a decided signal 11. A signal is tapped both at the input end before the threshold decision element 2 and at the output end after the threshold decision element 2. The subtraction of these two signals yields an error signal 10. Thus, the error signal 10 is simply the difference between the input to the threshold decision element 2 and the output of the threshold decision element 2, i.e., the decided signal 11. The decided signals are used directly to generate the error signal.

However, according to claim 1, the decided signals are first used to generate the synthetic dispersive signals, and the synthetic dispersive signals are then used to generate the error signal.

It appears that, in the Examiner's opinion, the decided signal 11 in Fig. 1 corresponds to the recited decided signal; and the error signal 10 in Fig. 1 corresponds to the recited error signal. However, the Examiner has failed to point out which signal in Fig. 1 corresponds to the recited synthetic dispersive signals, and how can the device in Fig. 1 generate the synthetic dispersive signals. Accordingly, by asserting that the Background part of the present application teaches claim 1 with the sole exception of the parallel decision circuits, the Examiner has read the limitation synthetic dispersive signals and the generation thereof out of claim 1, which is improper.

The Examiner has agreed that the Background part of the present application does not teach or suggest the feedback decision circuit, which comprises two parallel-connected threshold decision elements. However, the Examiner asserts that Du teaches this feature, referring to Figs. 2 and 7; column 4, line 64 to column 5, line 12; and column 7, line 1 to column 8, line 13 of Du. The Examiner then combines the Background part of the present application and Du to reject claim 1. Applicants respectfully disagree.

Du provides a dual decision feedback equalizer (DDFE) with selective attenuation. As shown in Fig. 7 of Du, a DDFE 140 comprises two nominally identical DFEs, having first and second slicers 152 and 154, feedback filters 156 and 158, attenuators 202 and 204, summing junctions 160 and 162, multi-state buffers 164 and 166, and squaring blocks 168 and 170. Each of the two DFEs generates a decision sequence, and the DDFE 140 determines which decision sequence is correct.

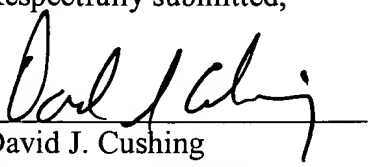
Thus, the two DFEs of Du operate independently from each other, and output of one of them is decided to be the correct decision sequence. Even if a skilled artisan were to combine Du and the equalizer shown in Fig. 1 of the present application, as the Examiner has suggested, he/she would not know how to connect two equalizers shown in Fig. 1 together to generate the recited synthetic dispersive signals, and then use the synthetic dispersive signals to generate the error signal. This only becomes obvious with the benefit of hindsight after reviewing the present application.

Wedding provides an optical receiver. Alelyunas provides a hybrid equalizer system, which has an adaptive linear equalizer pre-filter for filtering incoming sampled communication signals, and an adaptive decision feedback equalizer for providing error filtering. Neither of them supplies any deficiencies of the equalizer described in the Background part of the present application and Du. Accordingly, Applicants respectfully submit that claim 1 and its dependent claims 2-4 are patentable. Claims 5-8 are patentable for the same reasons.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



David J. Cushing
Registration No. 28703

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON DC OFFICE
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